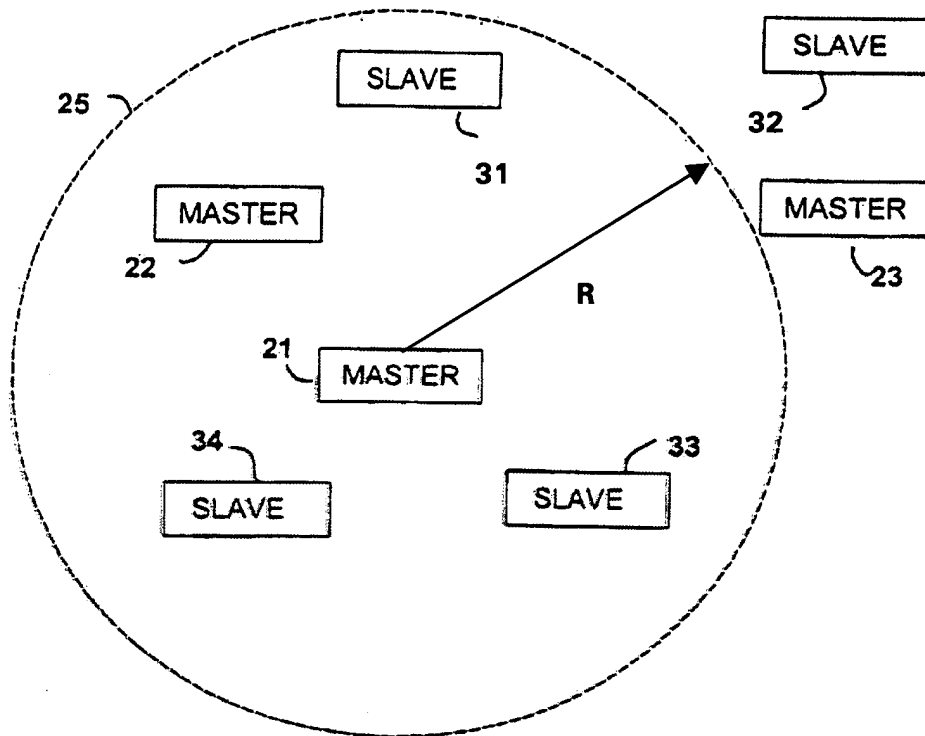


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FIG. 1



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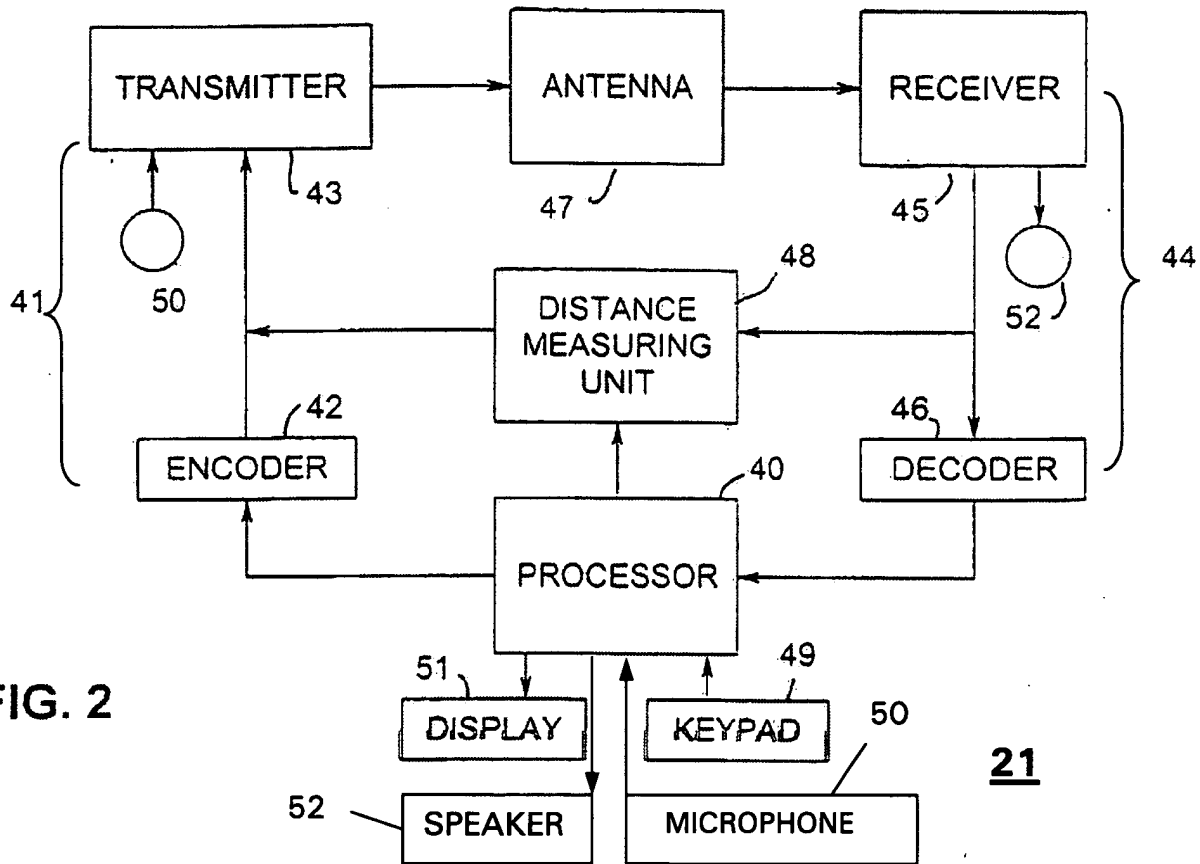


FIG. 2

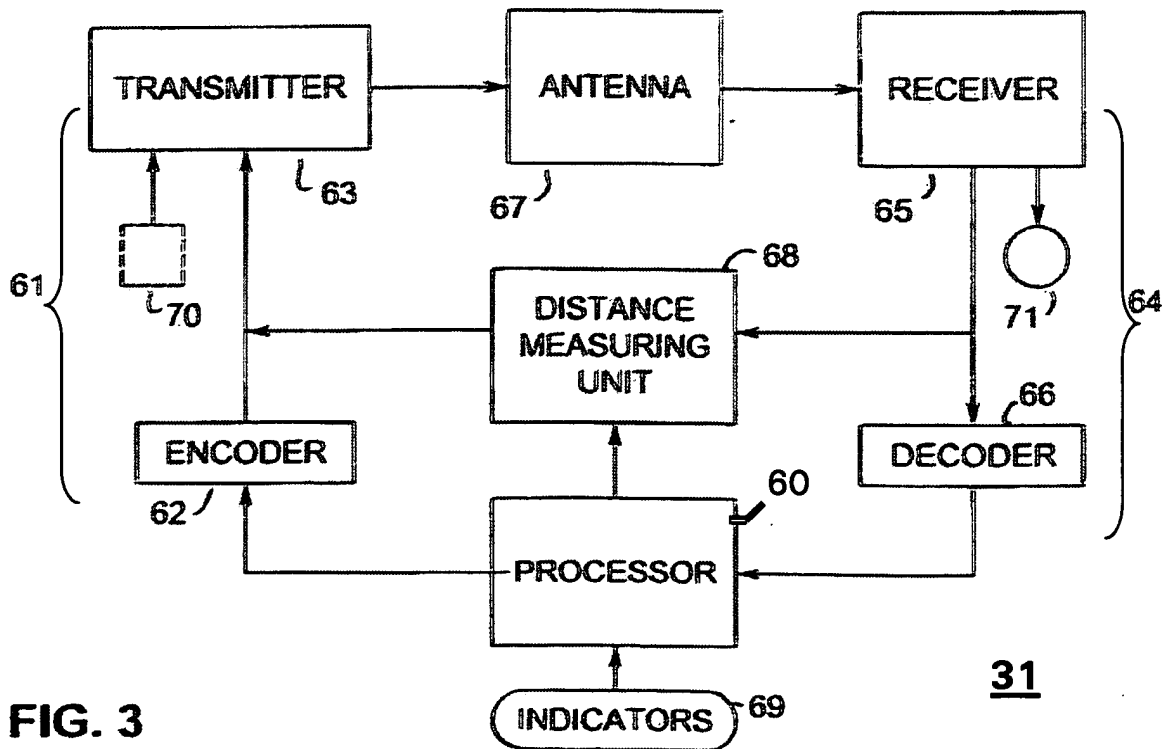
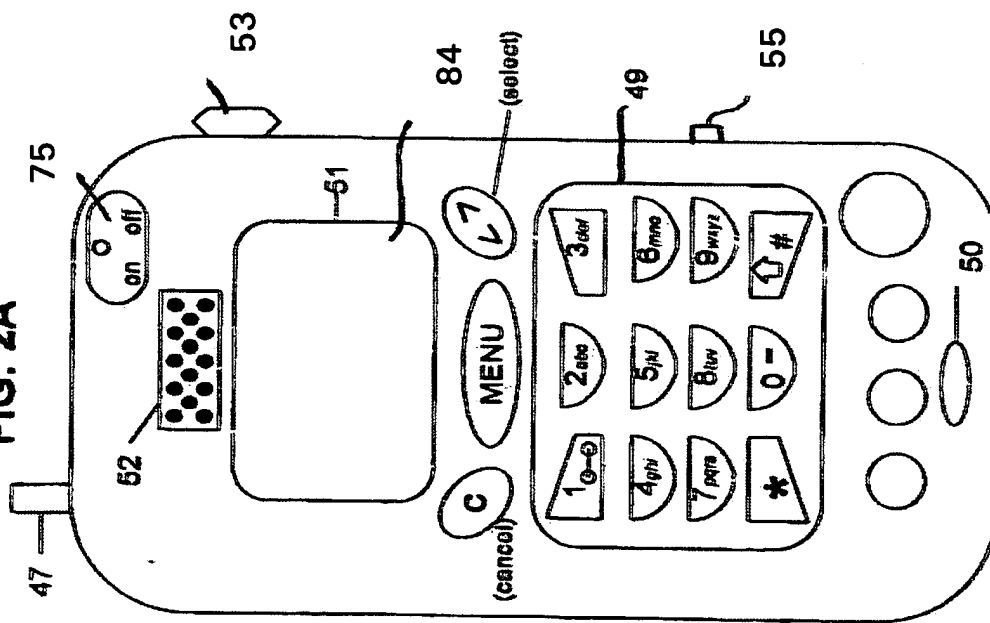


FIG. 3

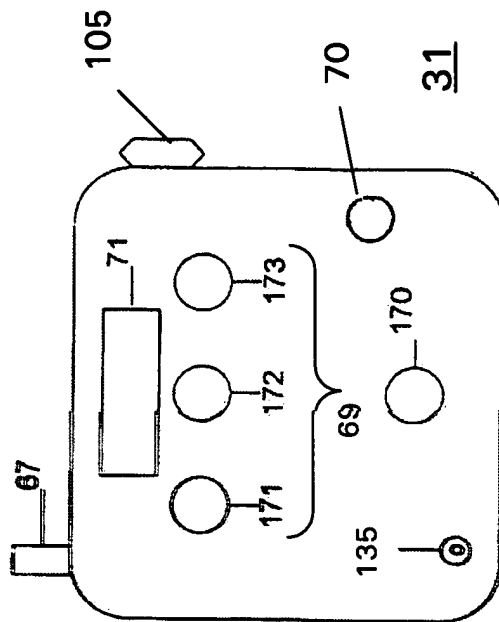
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FIG. 2A



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FIG. 3A



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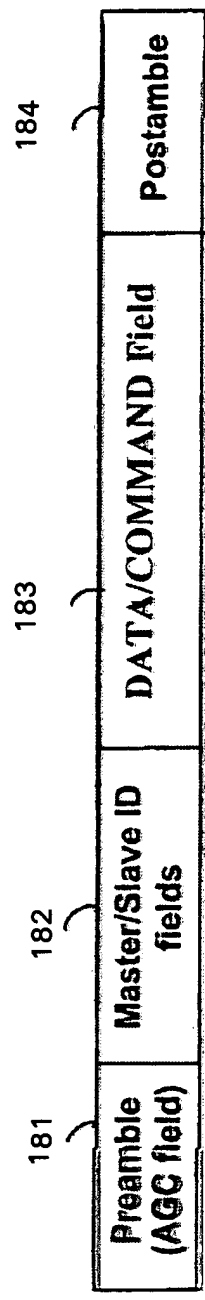


FIG. 3B

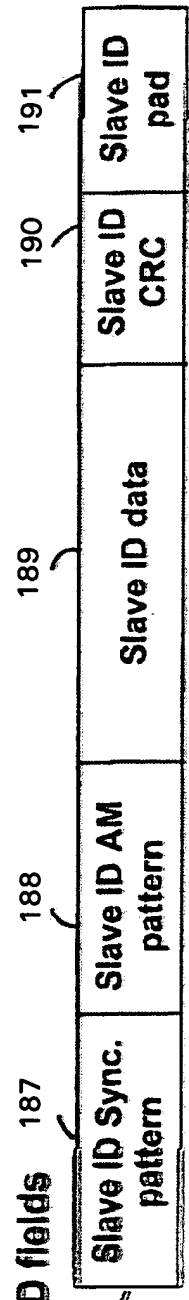


FIG. 3C

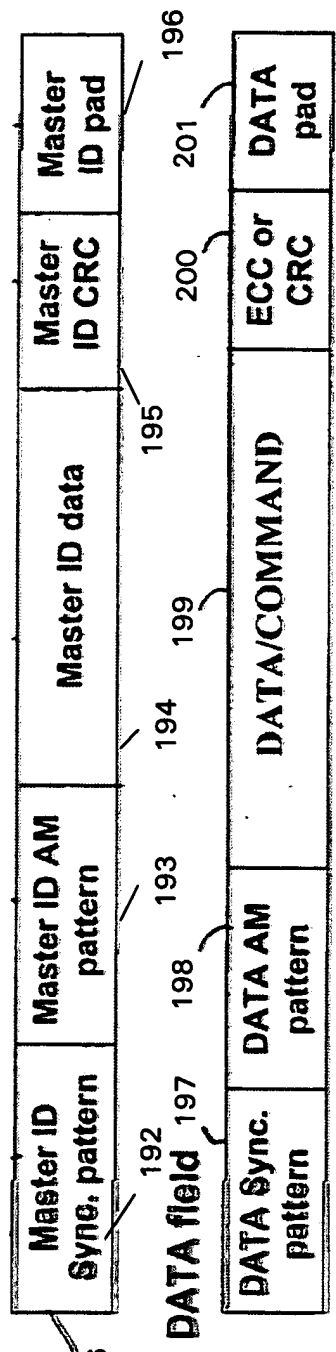


FIG. 3D

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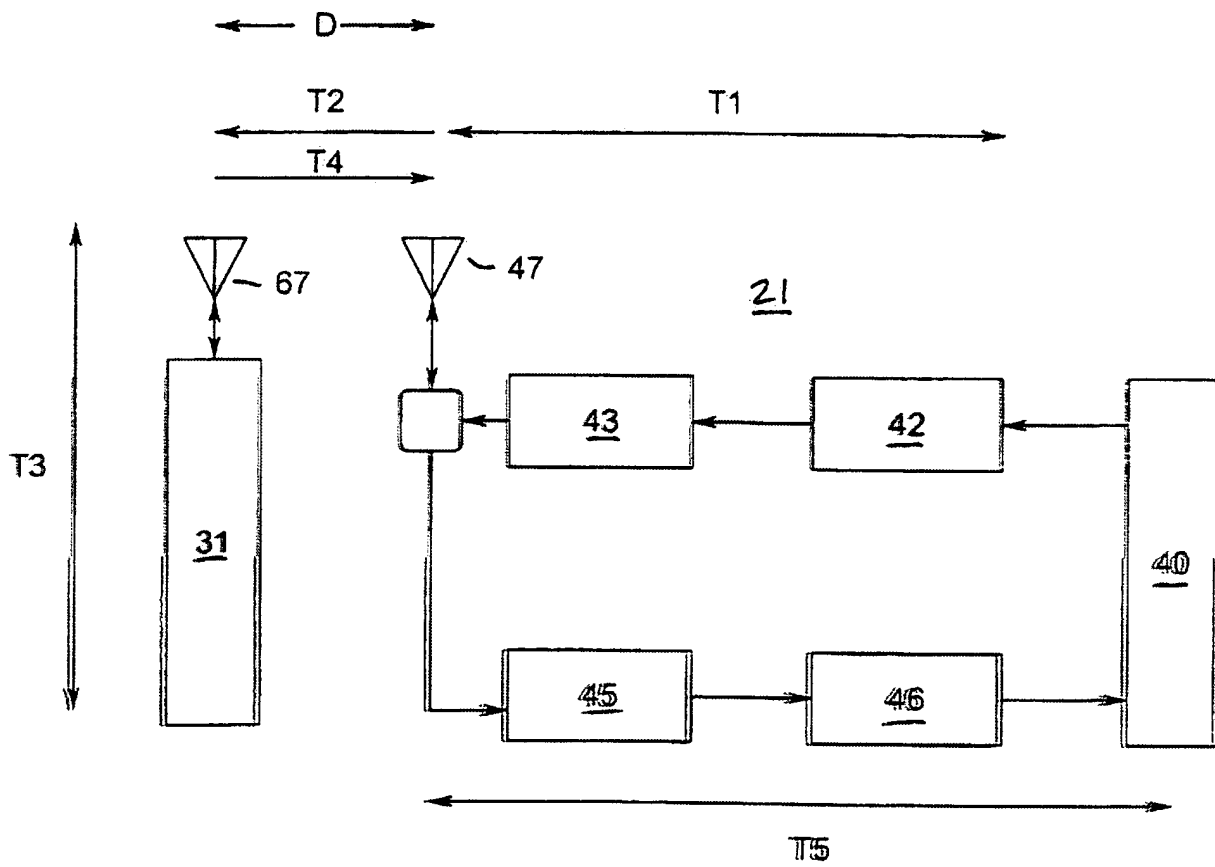


FIG. 4

FIG. 4A

DISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 1

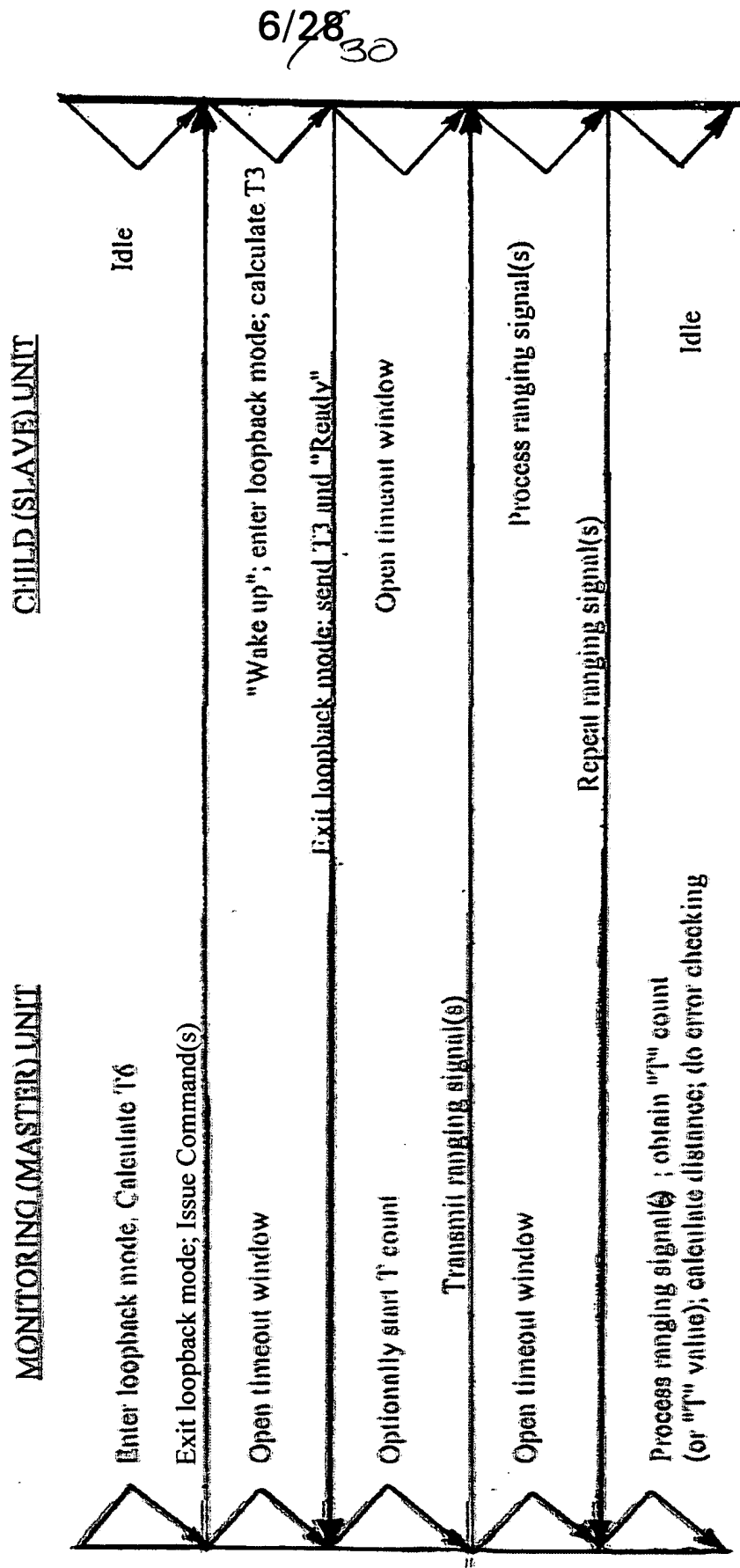
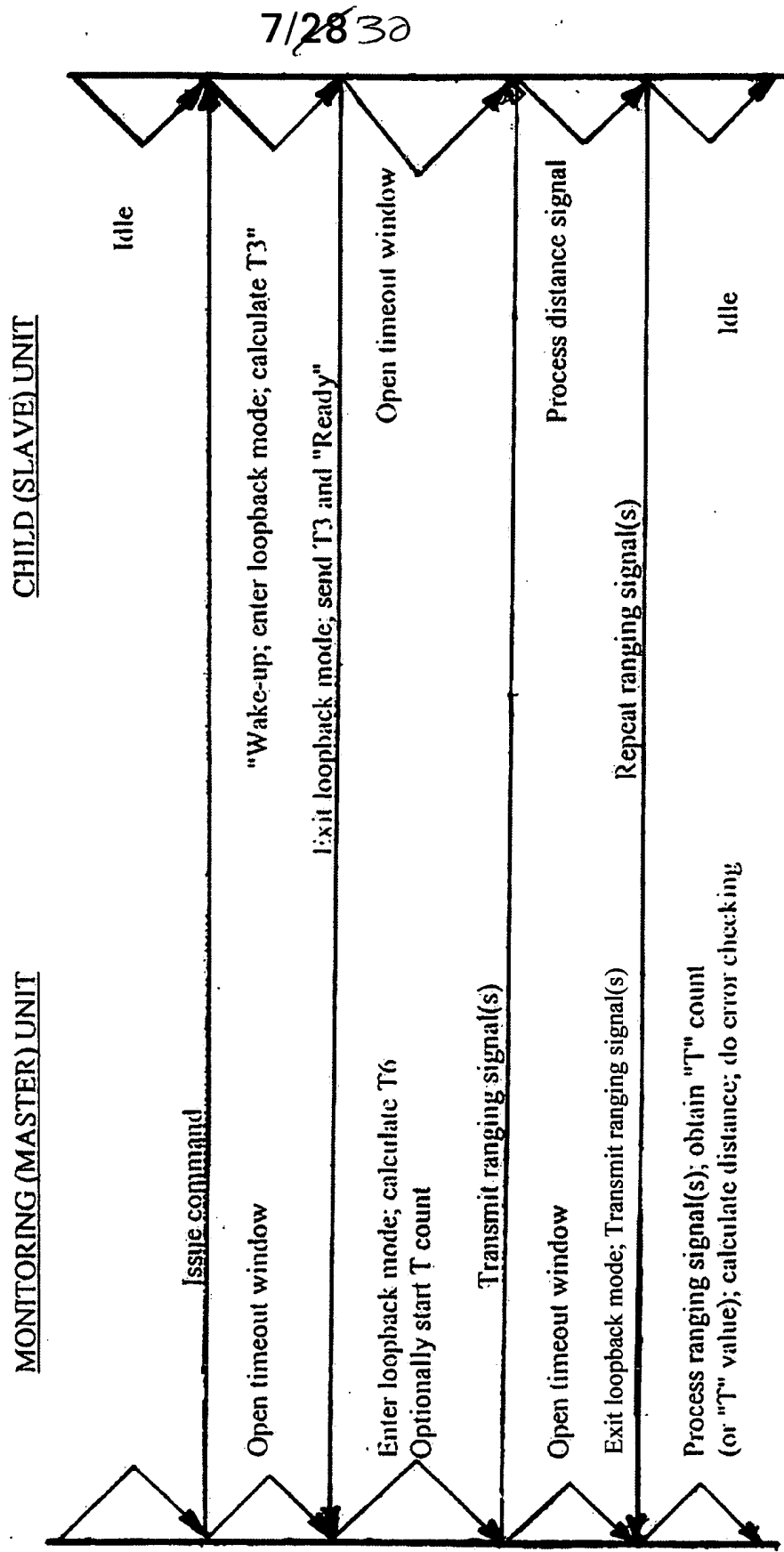


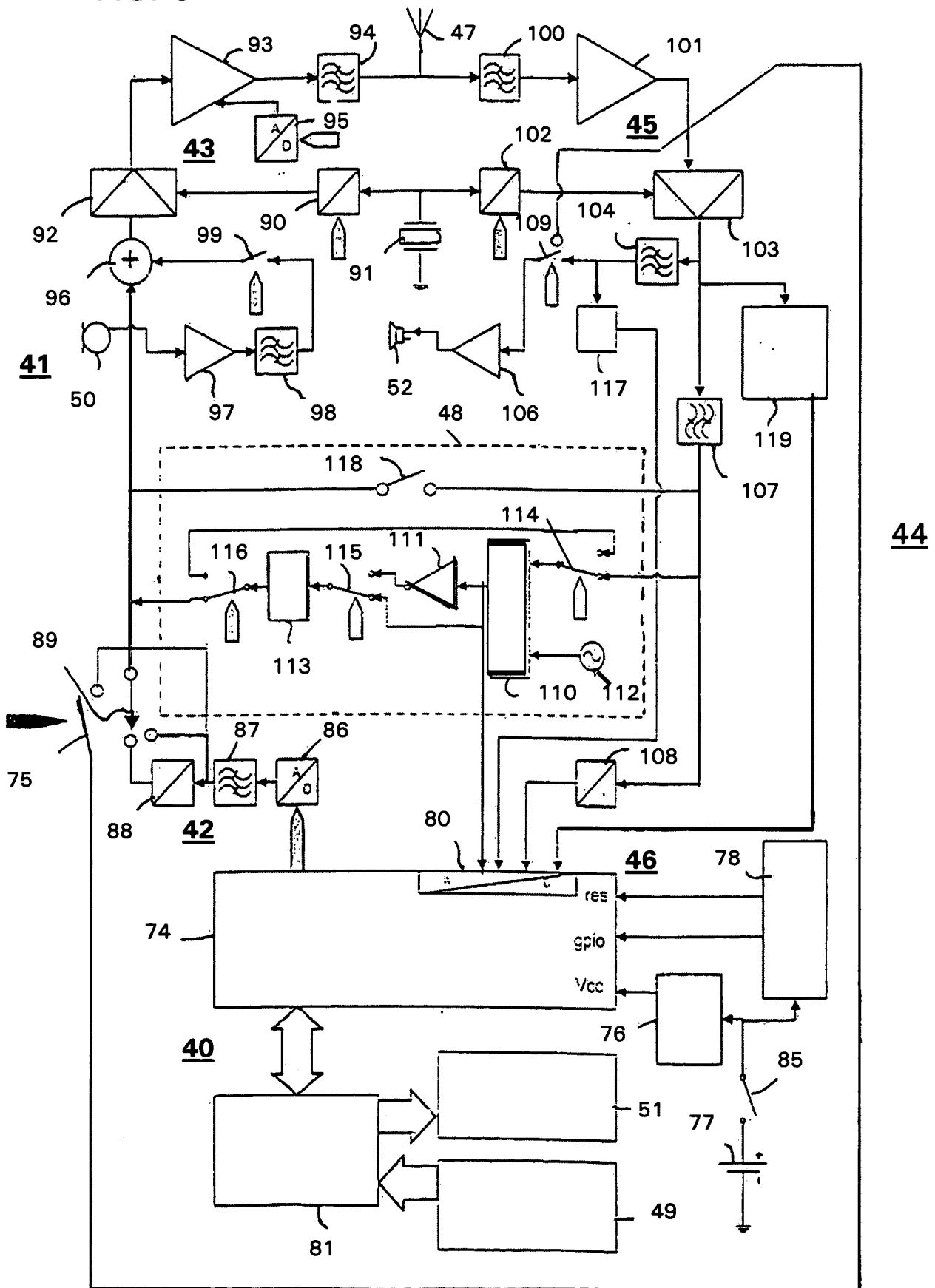
FIG. 4B

DISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 2



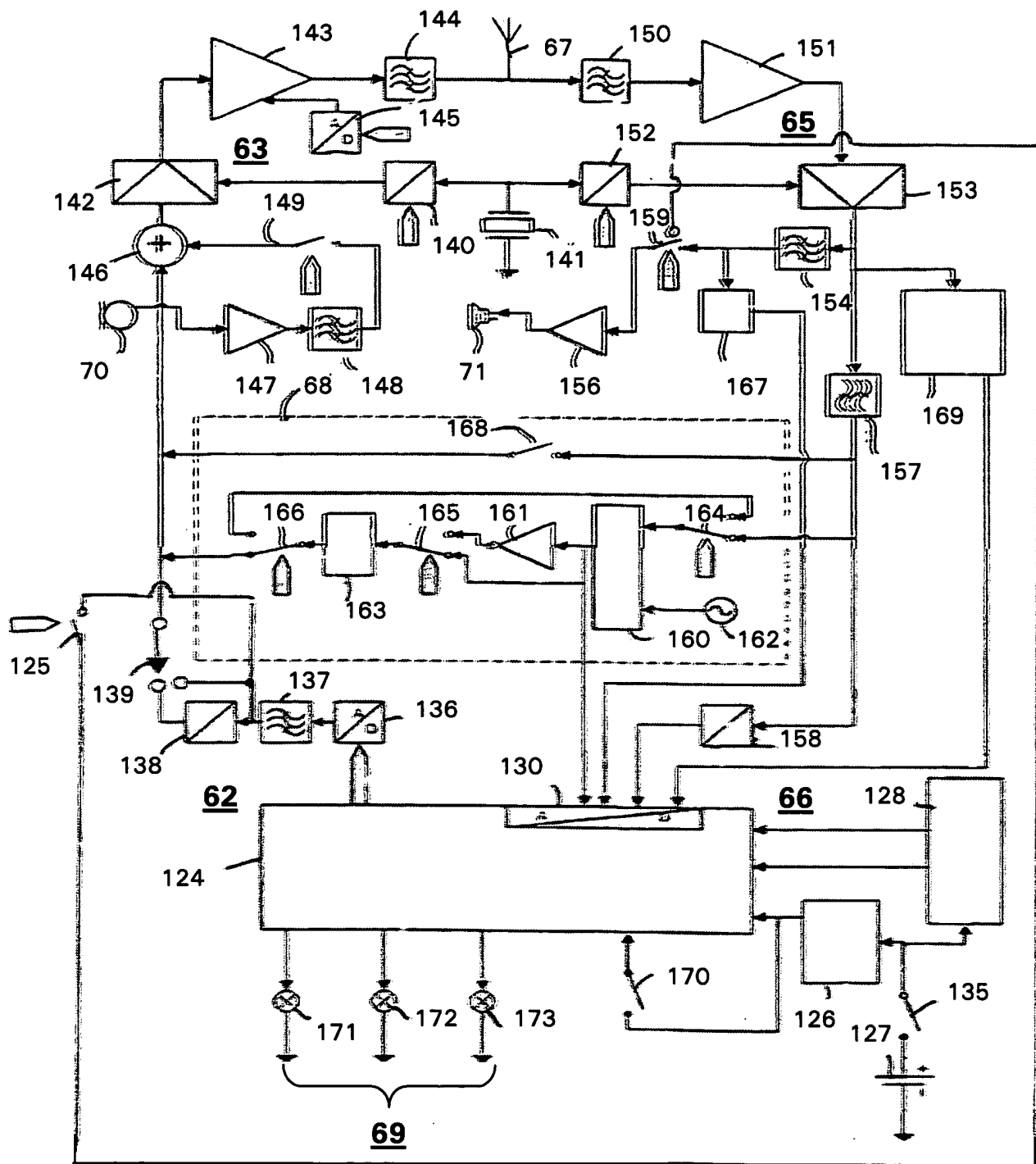
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FIG. 5



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FIG. 6A



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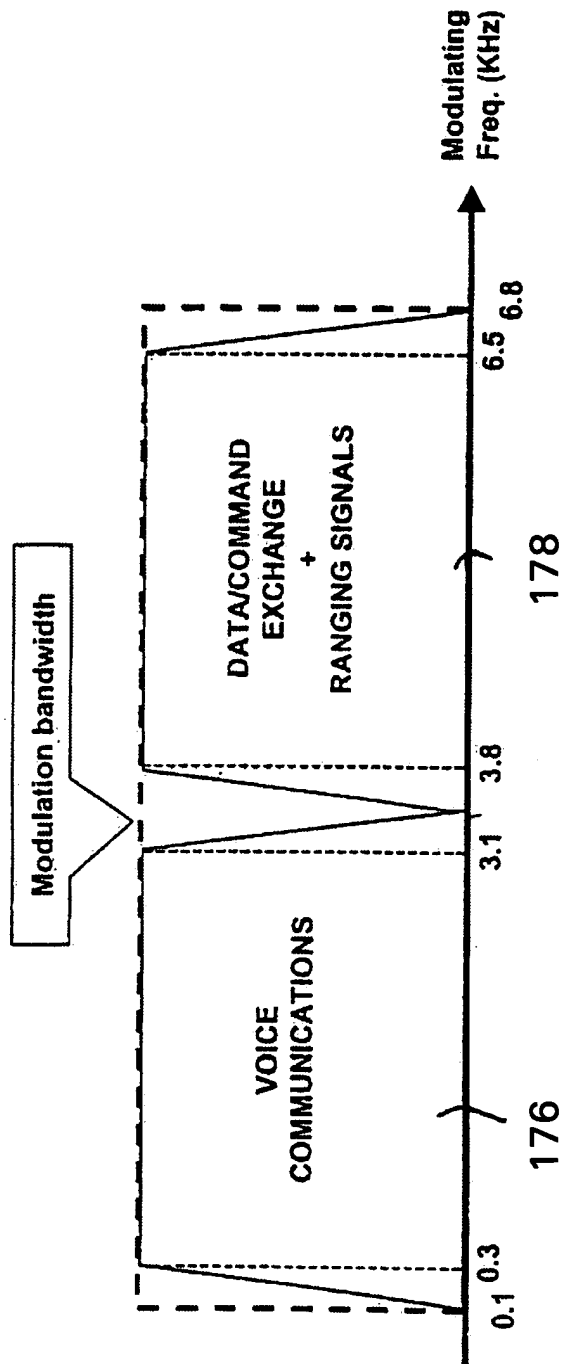


FIG. 6B

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Position determination example

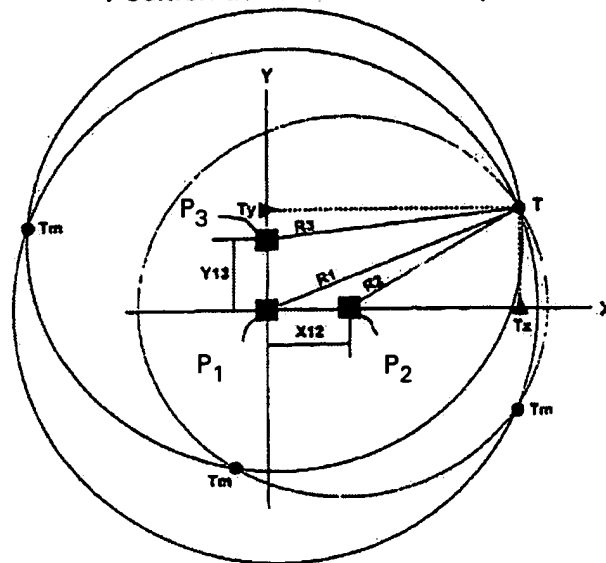


FIG. 7

Position determination ambiguity

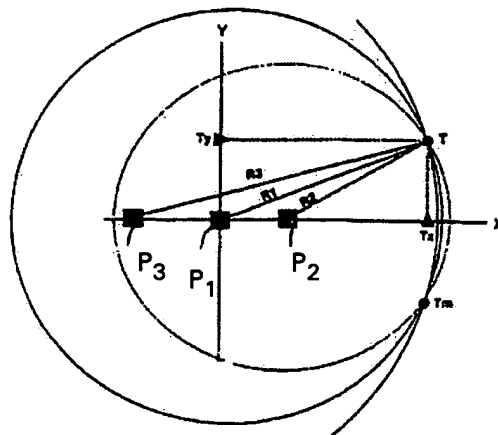


FIG. 8

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Position ambiguity and distance measurement error

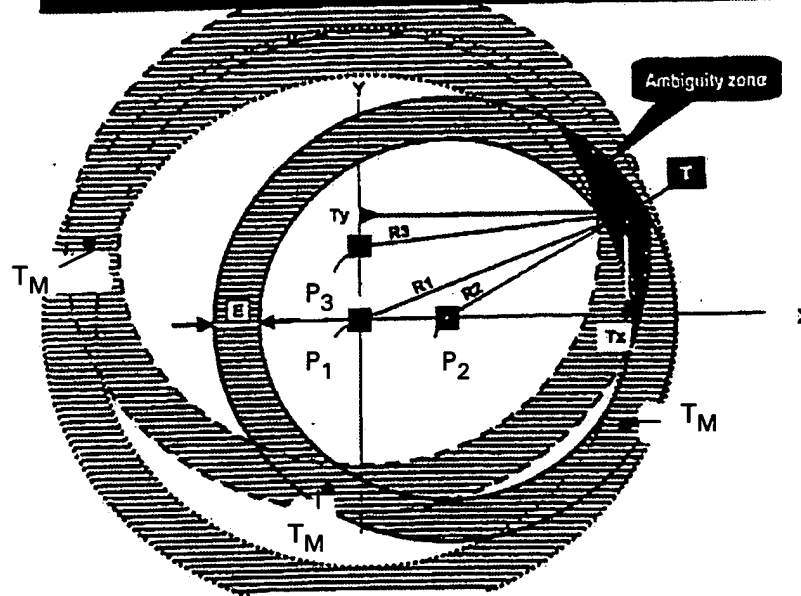


FIG. 9

Ambiguity reduction, example 1

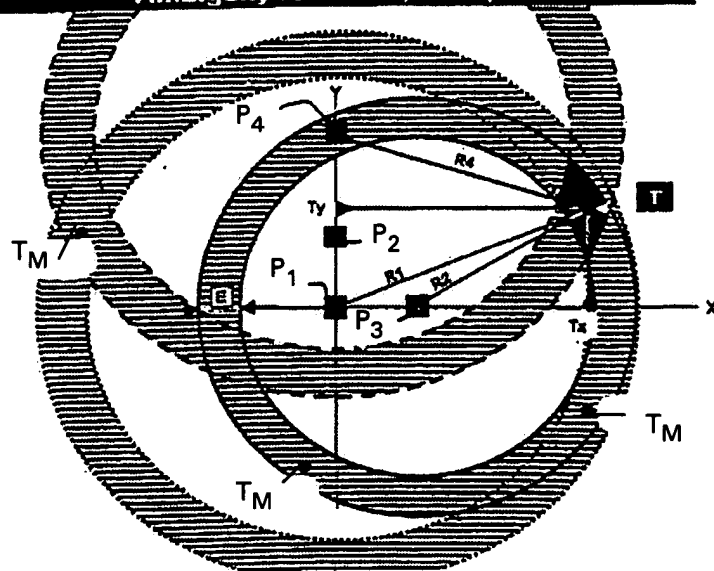


FIG. 10

Ambiguity reduction, example 2

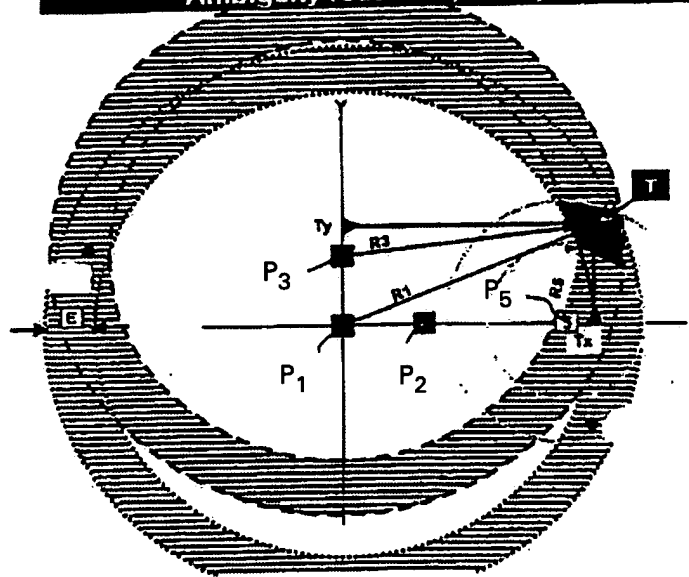
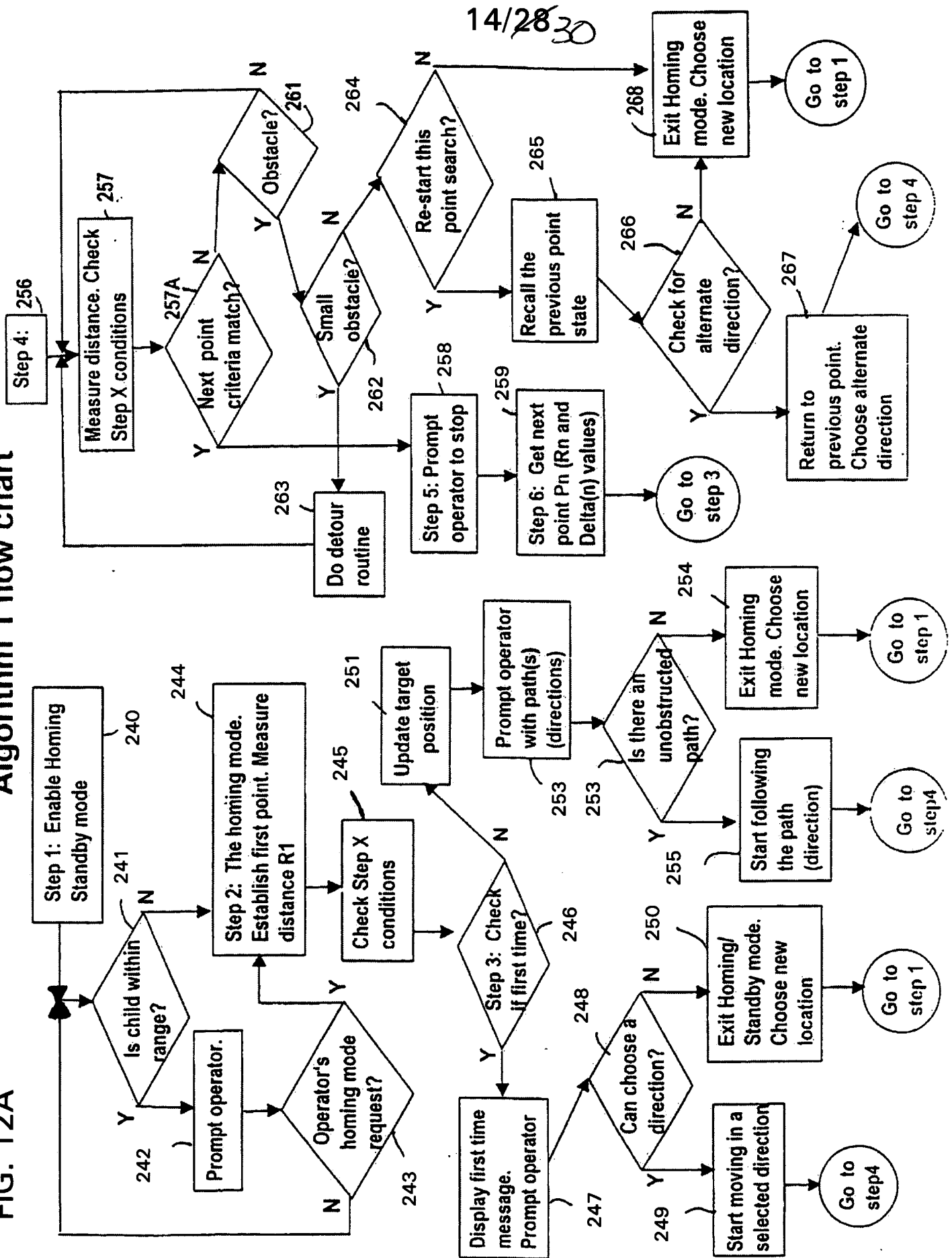


FIG. 11

FIG. 12A

Algorithm 1 flow chart



ALGORITHM 1 FLOW CHART, CONTINUED

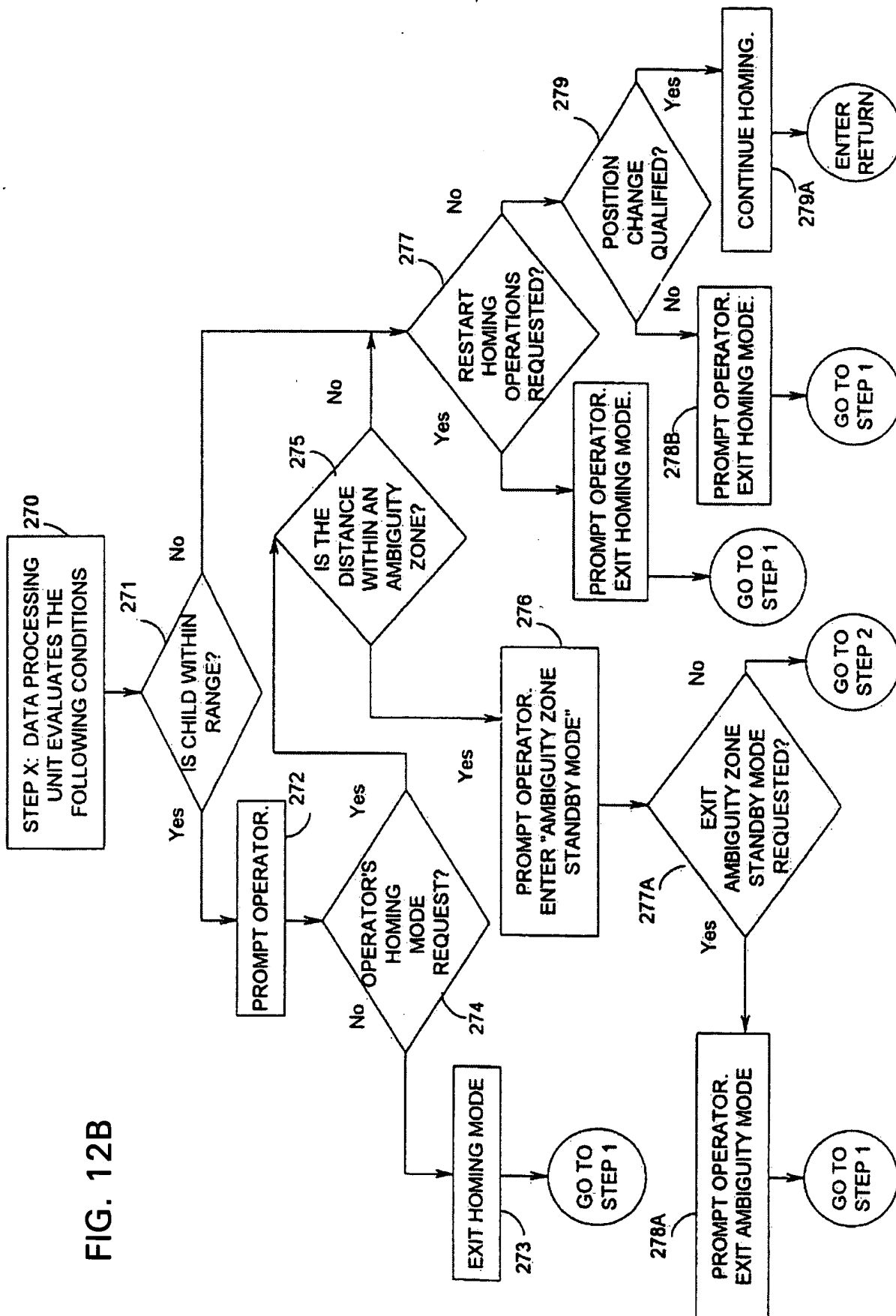


FIG. 12B

Algorithm 2 flow chart

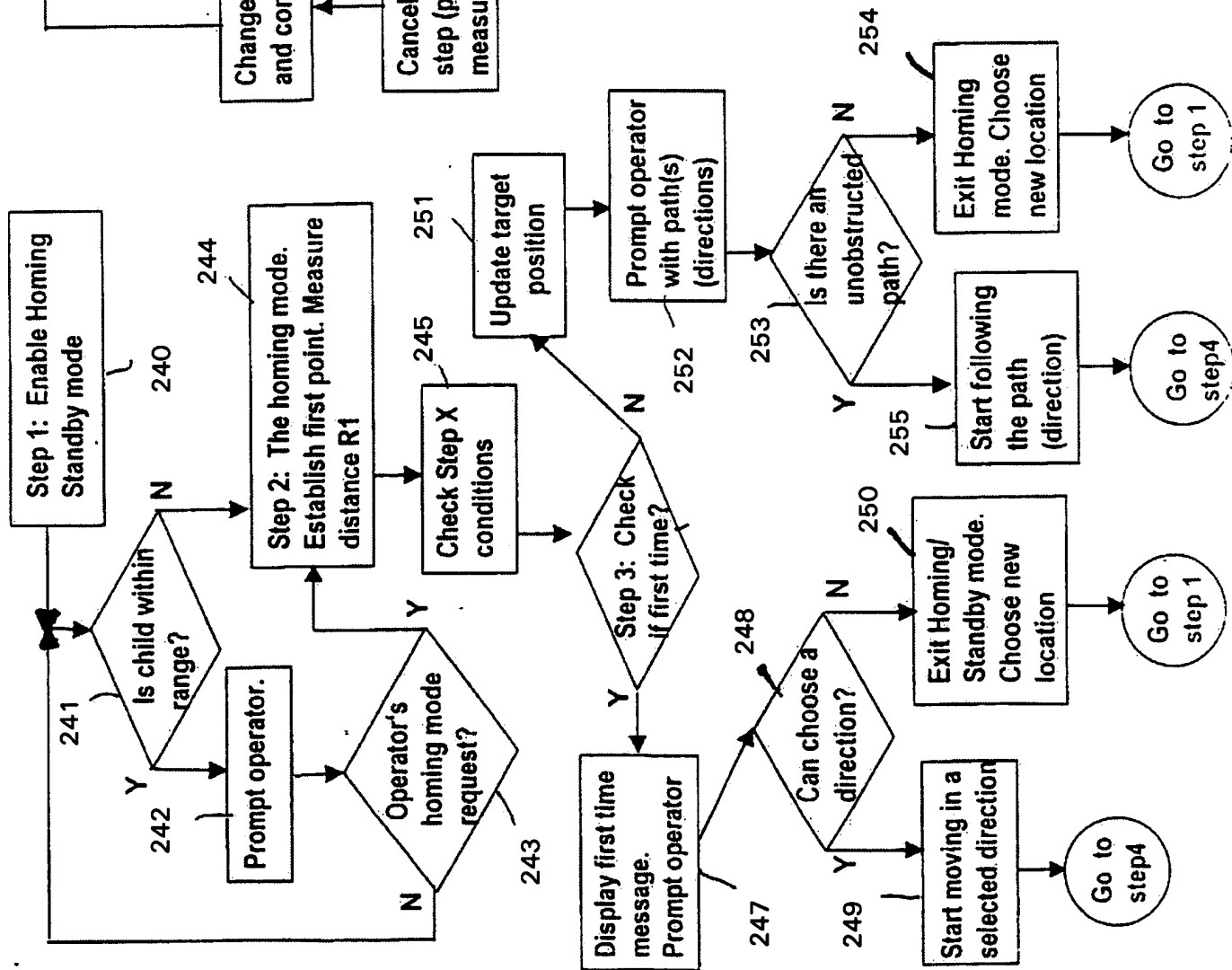
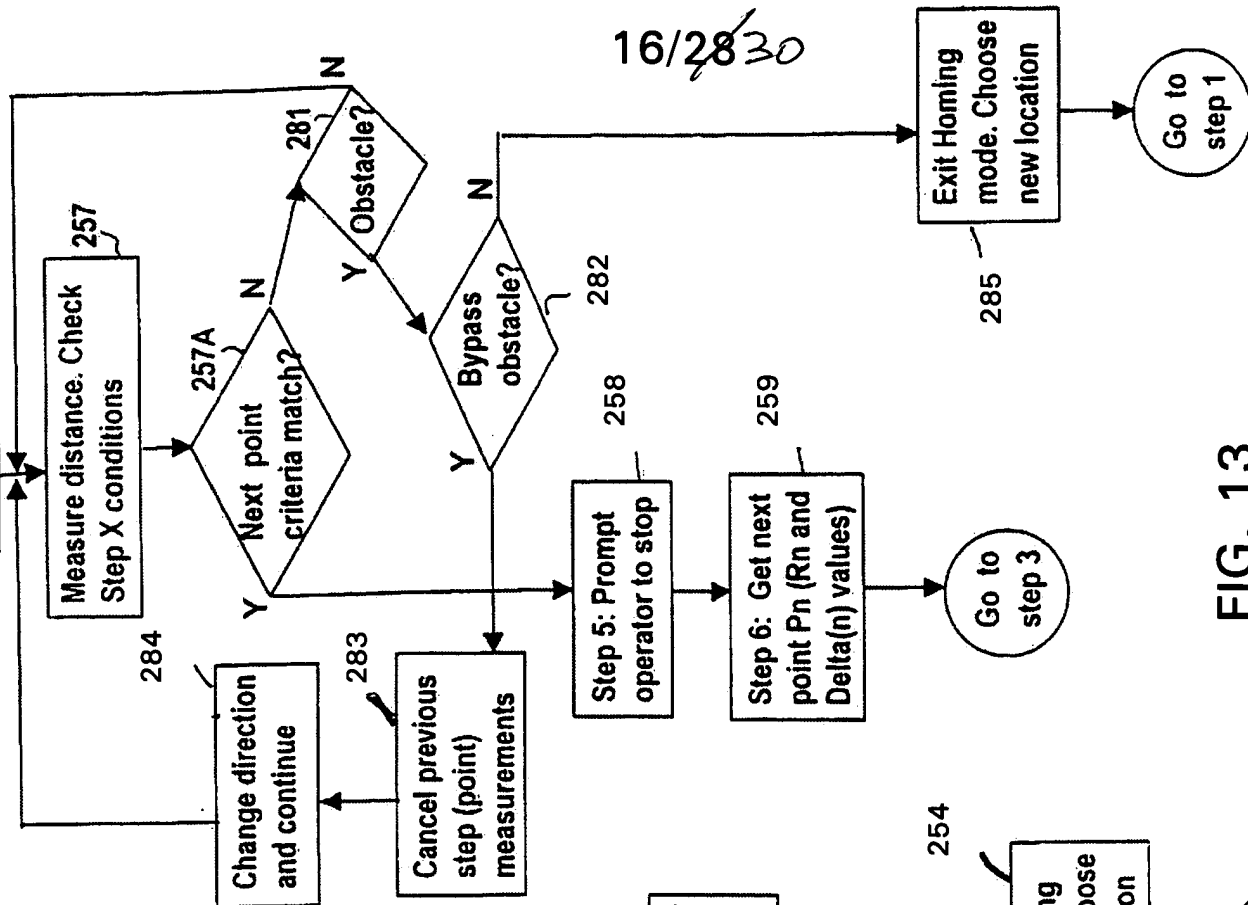


FIG. 13

Step 4:



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Algorithm 3 flow chart

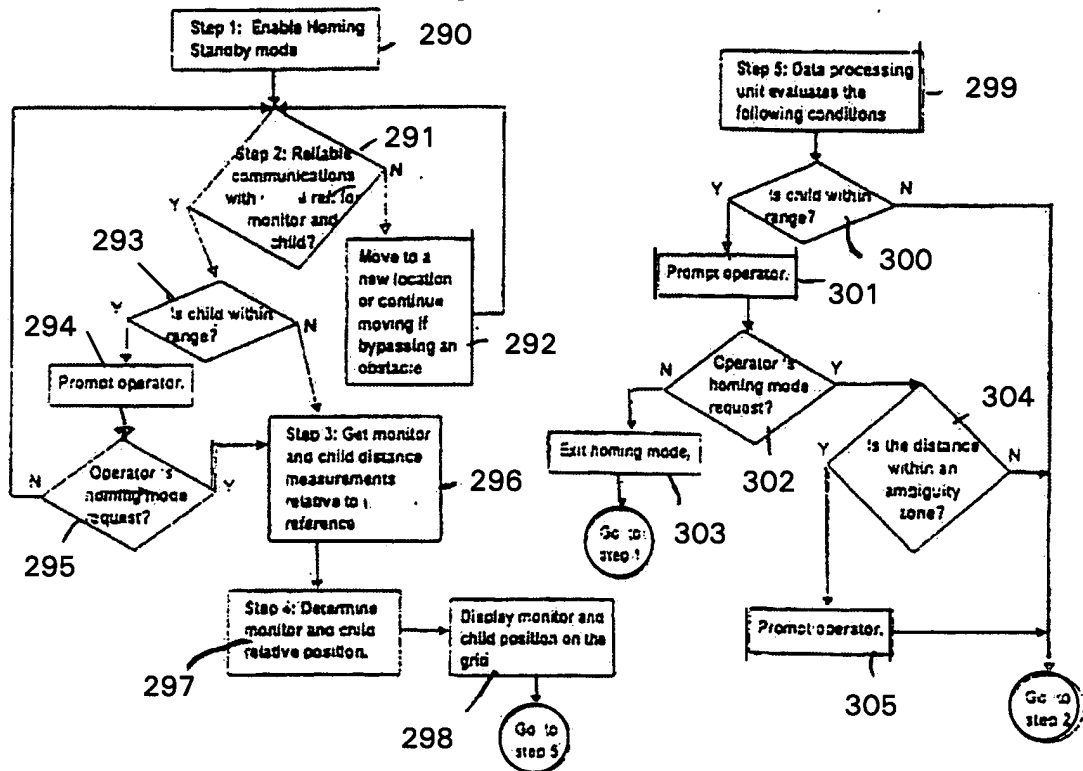


FIG. 14

Algorithm 1 homing

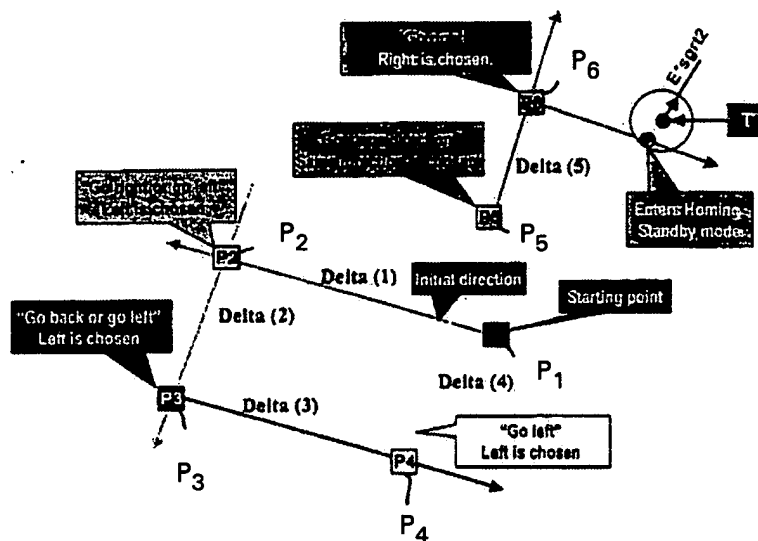


FIG. 15

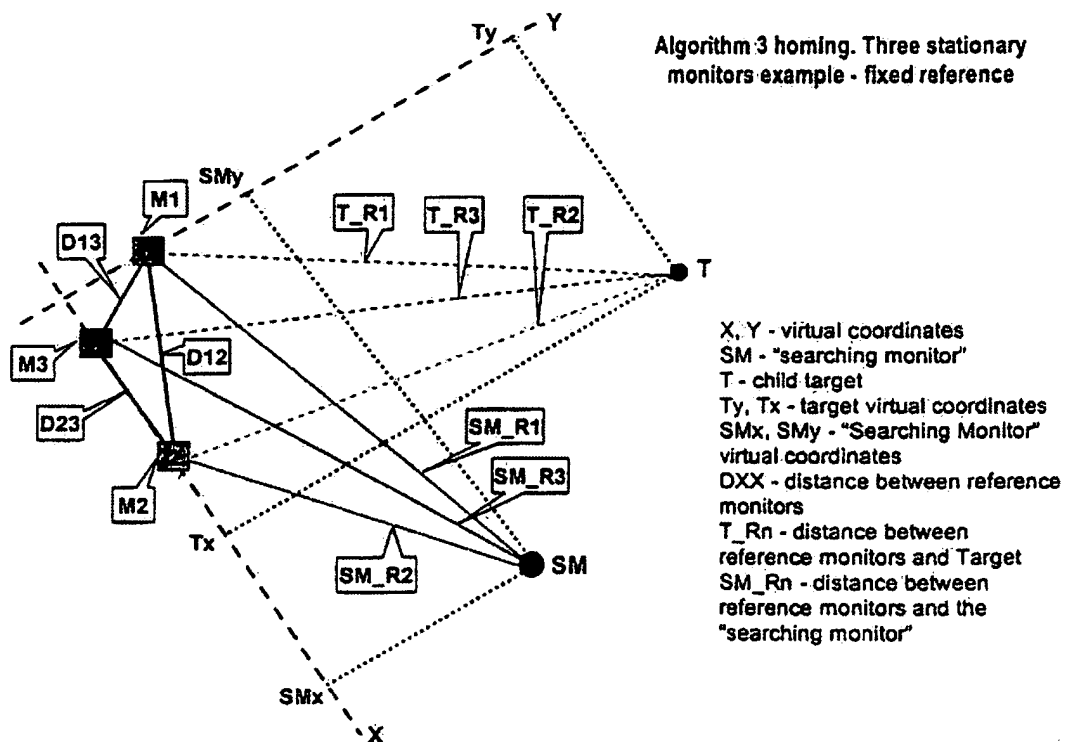


FIG. 16

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Algorithm 3 homing. Three stationary monitors reference example, continued
(virtual coordinates are rotated for mapping into display grid)

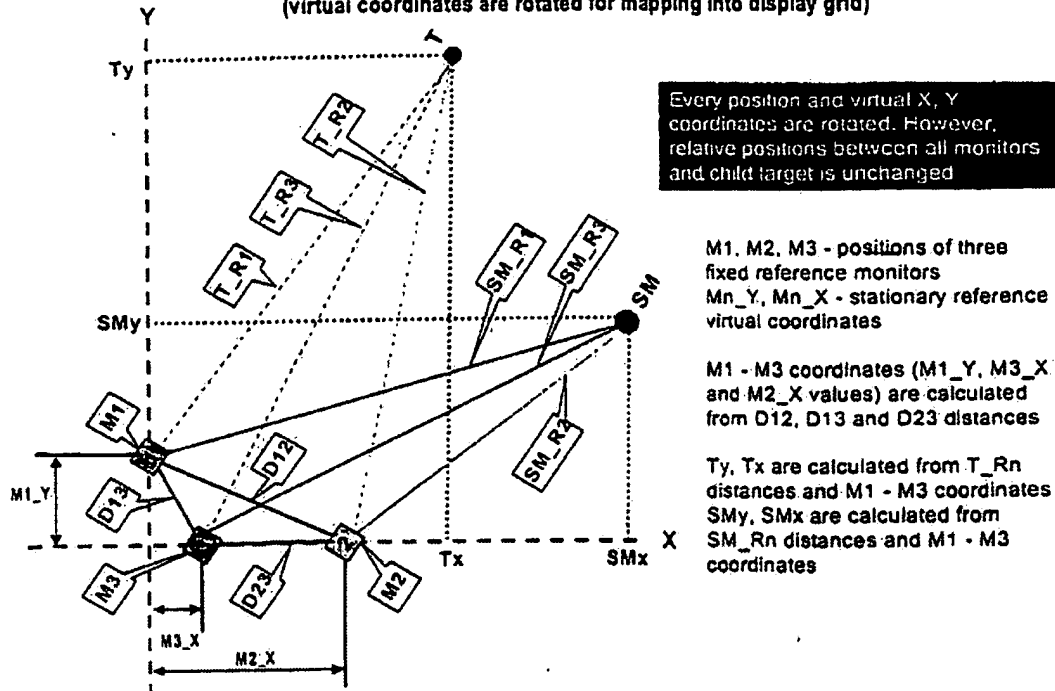


FIG. 17

Algorithm 3 homing. Three stationary monitors reference example, continued
(display grid)

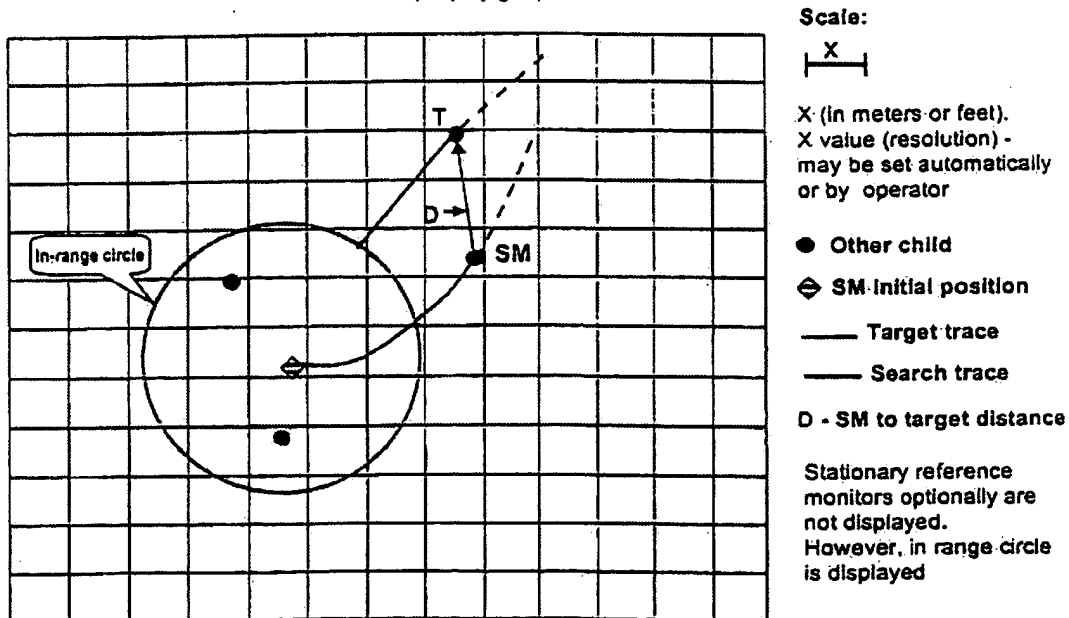


FIG. 18

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Algorithm 3 homing. Three moving monitors reference example,
(display grid)

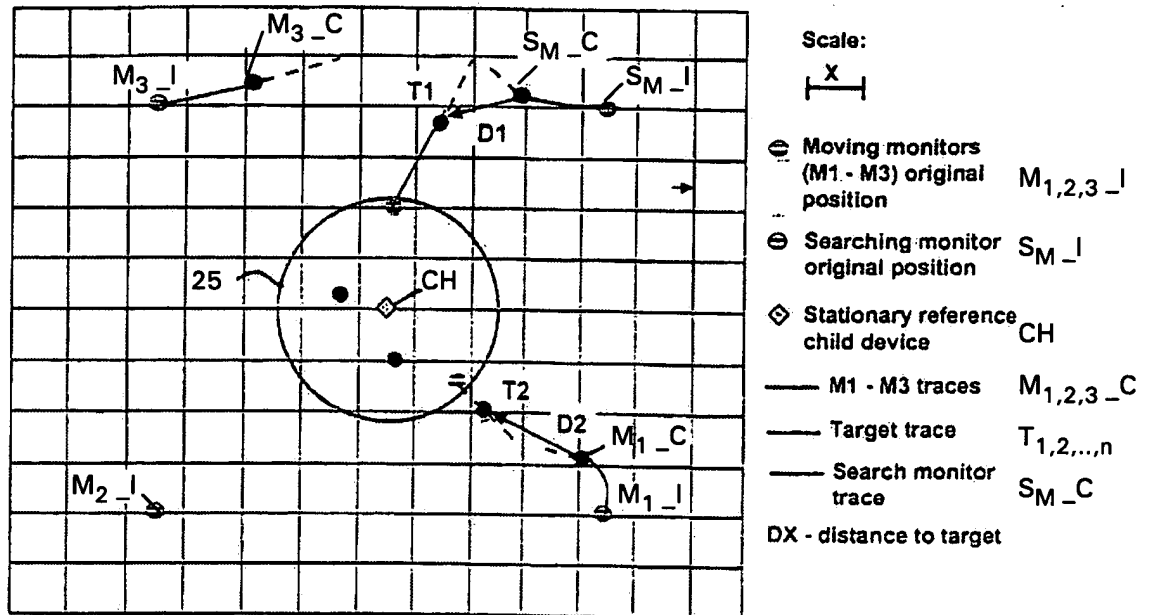
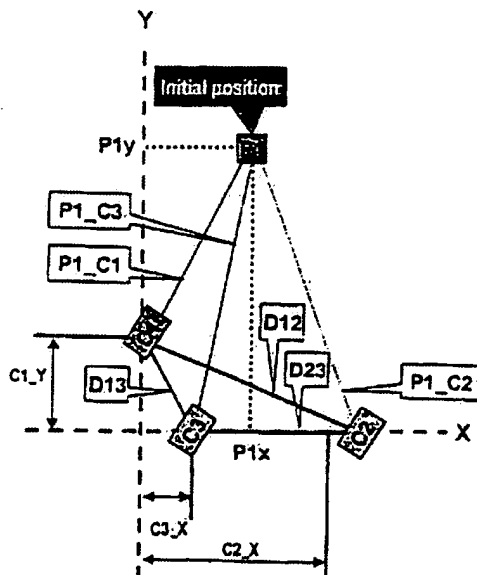


FIG. 19

Algorithm 2 homing. Three stationary child devices reference example
(virtual coordinates are rotated)



Every position and virtual X, Y coordinates are rotated. However, relative positions between all reference child devices searching monitor and target is unchanged

X, Y - virtual coordinates
C1, C2, C3 - positions of three stationary child reference monitors

C_{k_Y} , C_{k_X} - fixed child reference virtual coordinates are calculated from D12, D13 and D23 values

P_{ny} , P_{nx} are calculated from P_{n_Ck} distances and C1-C3 coordinates

FIG. 20

Algorithm 2 homing. Three stationary child devices reference example, continued

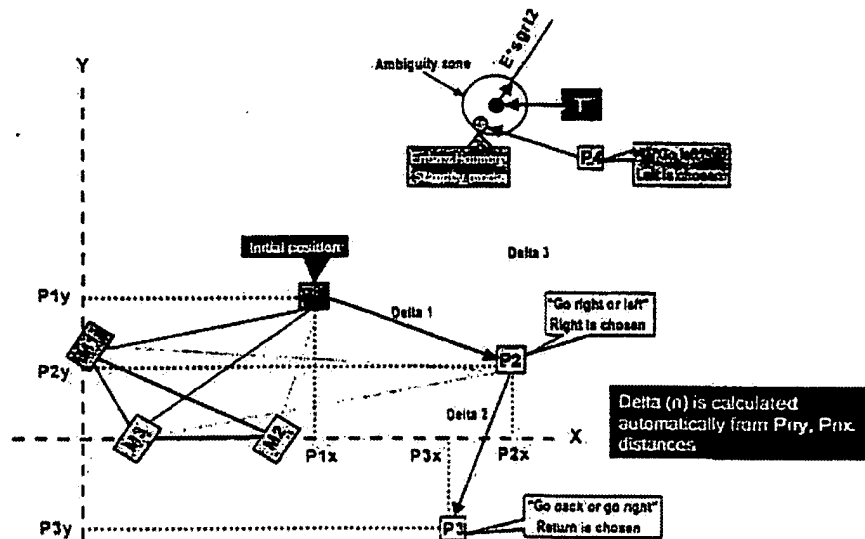


FIG. 21

Algorithm 2 homing. Three stationary child devices reference example, continued (obstacle avoidance/bypassing)

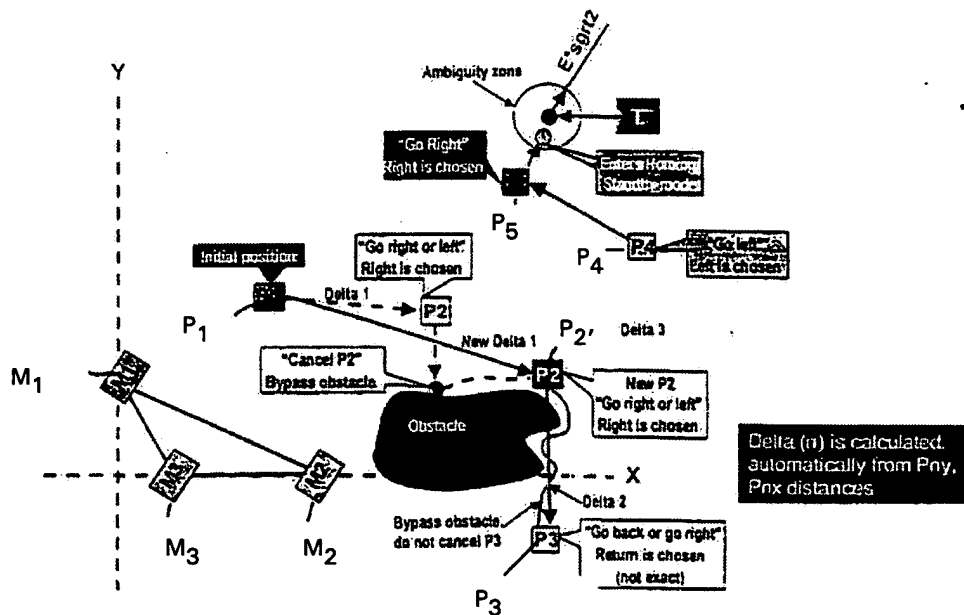


FIG. 22

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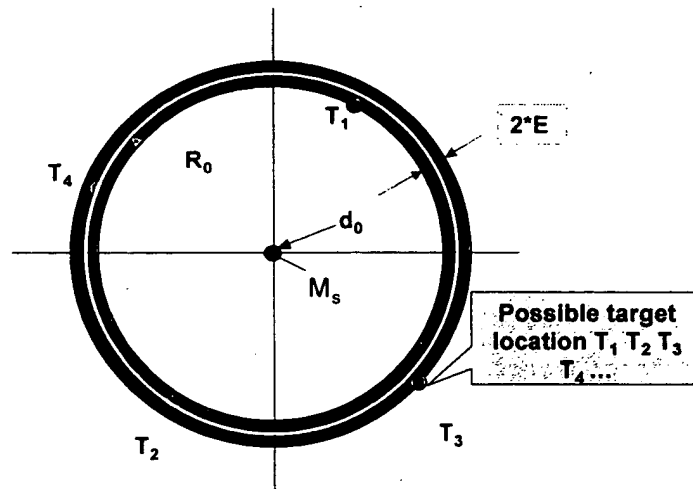


FIG. 23

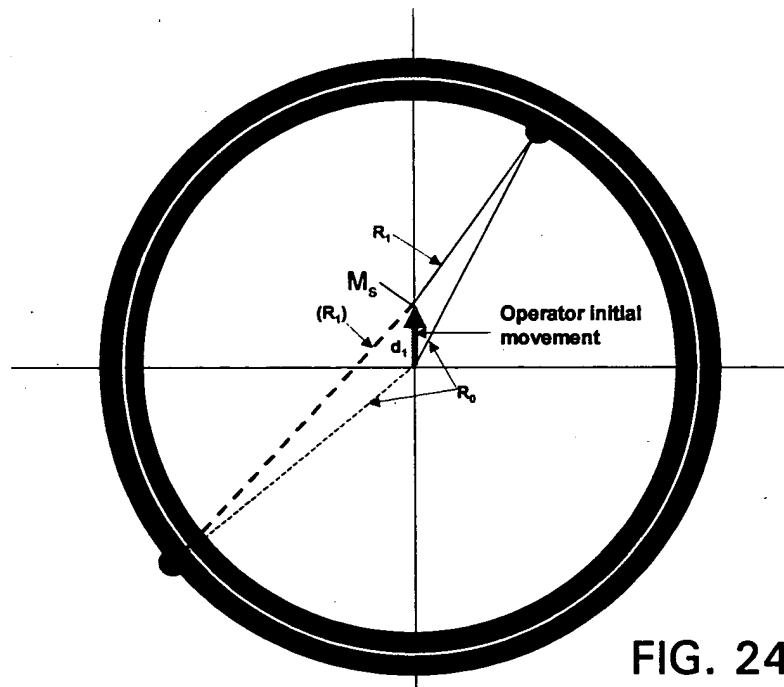
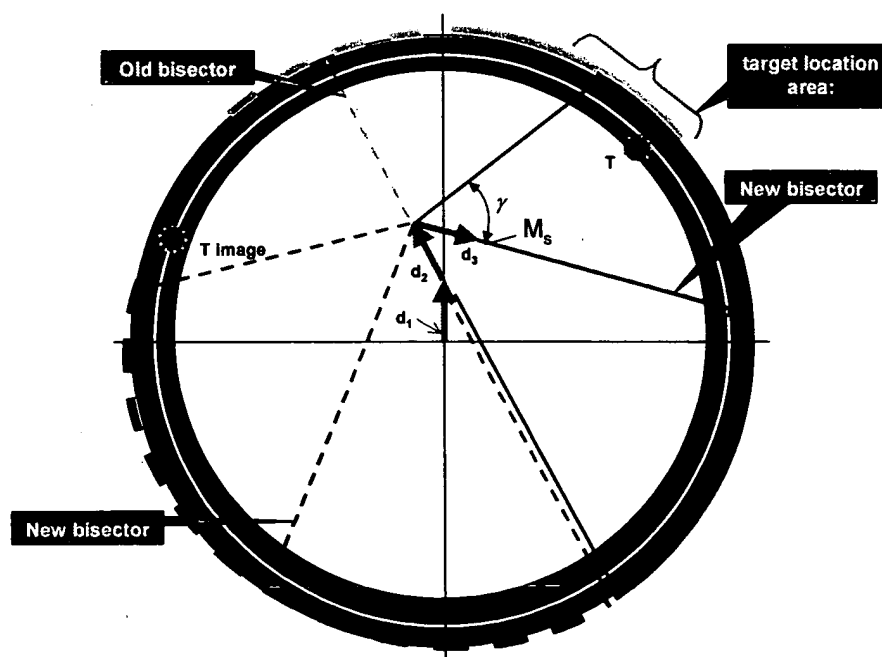
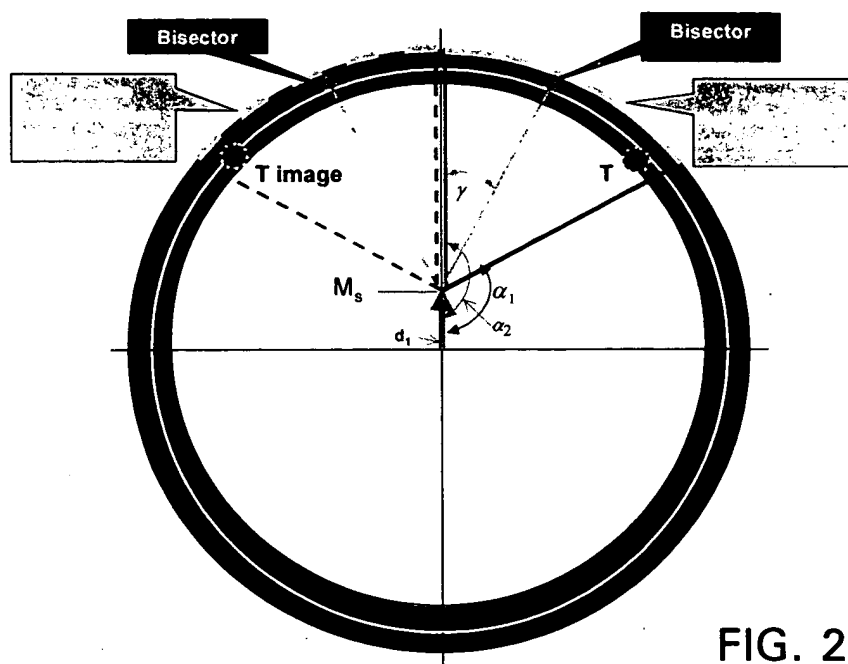


FIG. 24



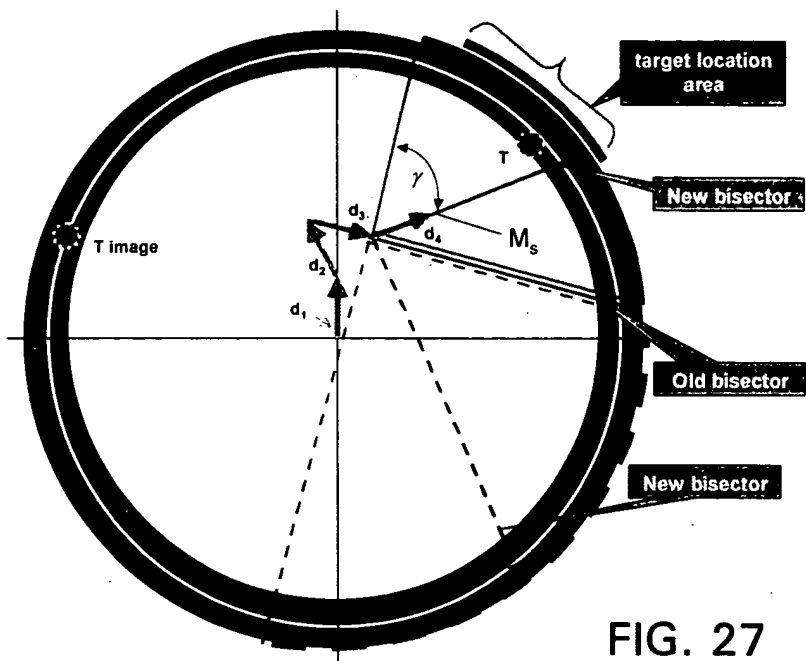


FIG. 27

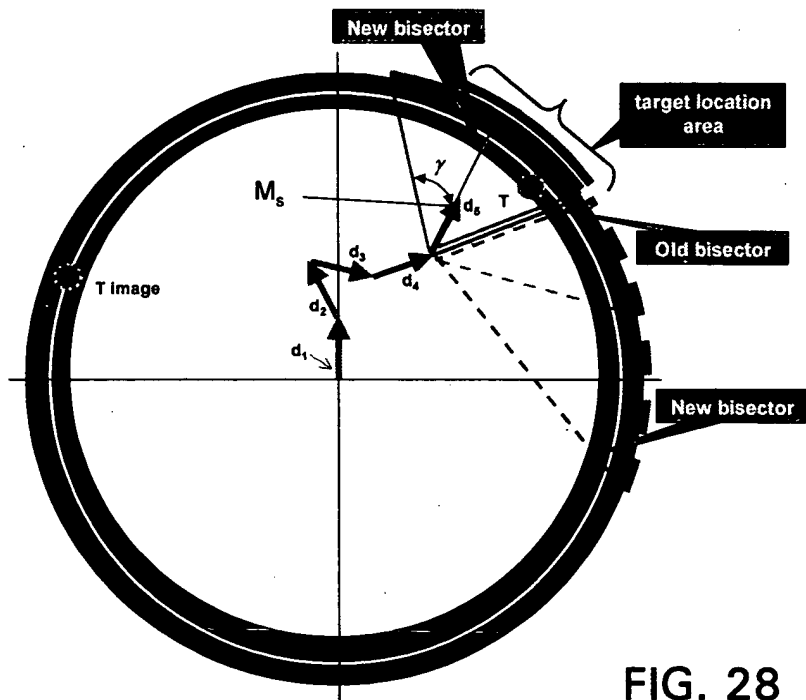


FIG. 28

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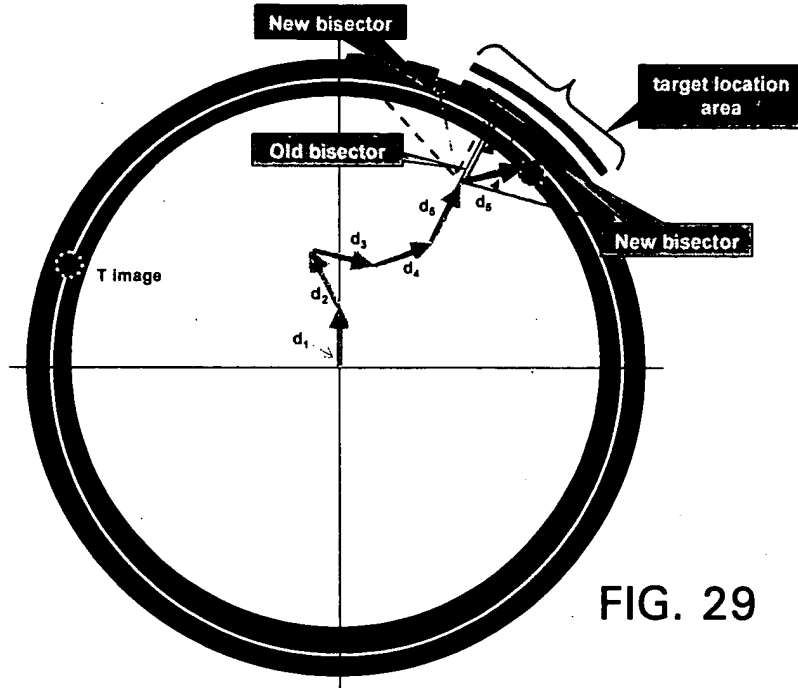


FIG. 29

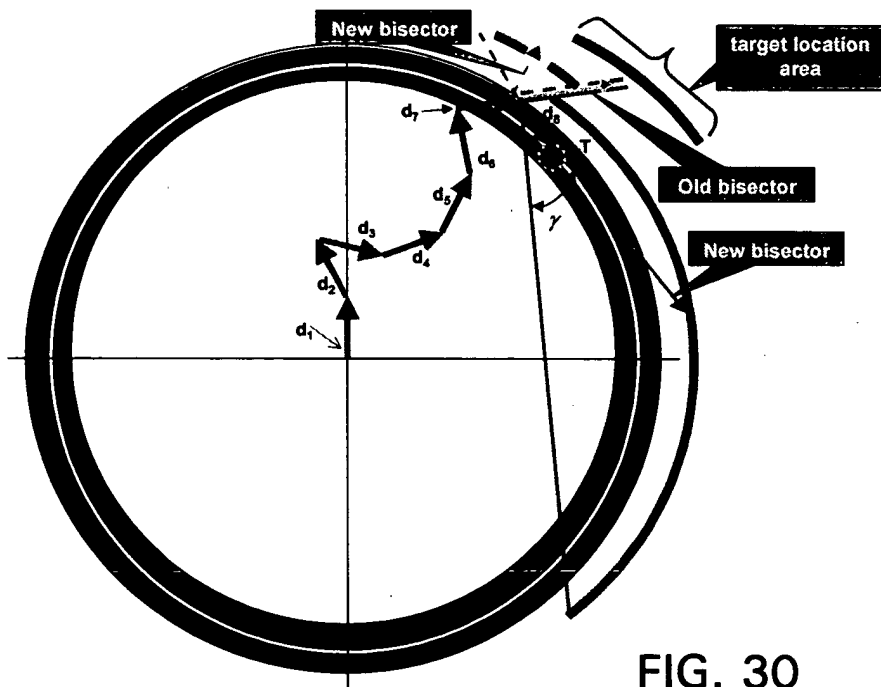


FIG. 30

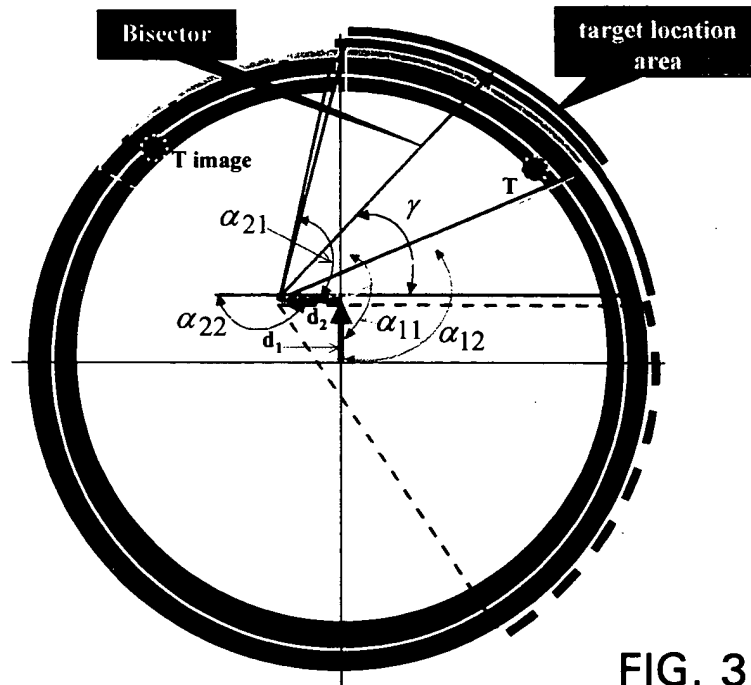


FIG. 31

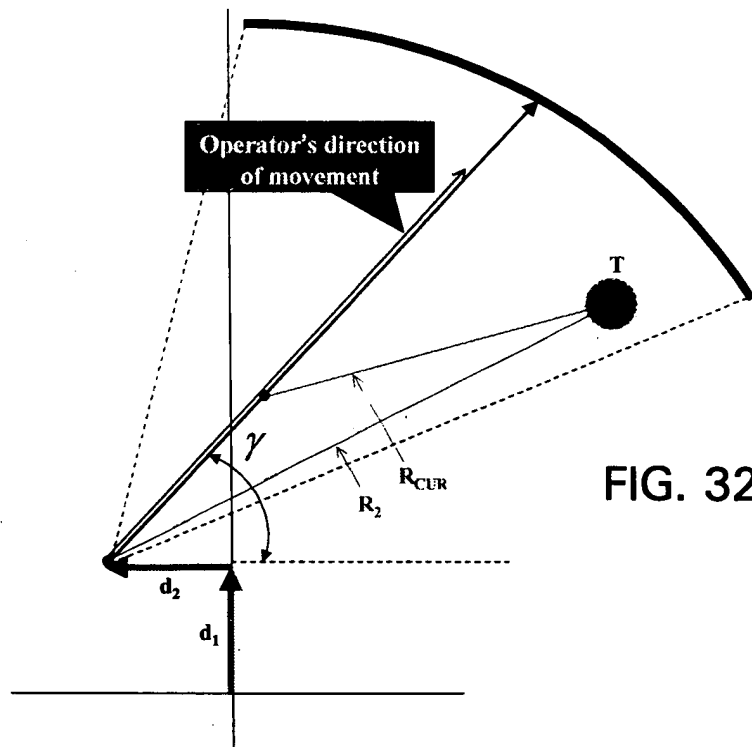


FIG. 32

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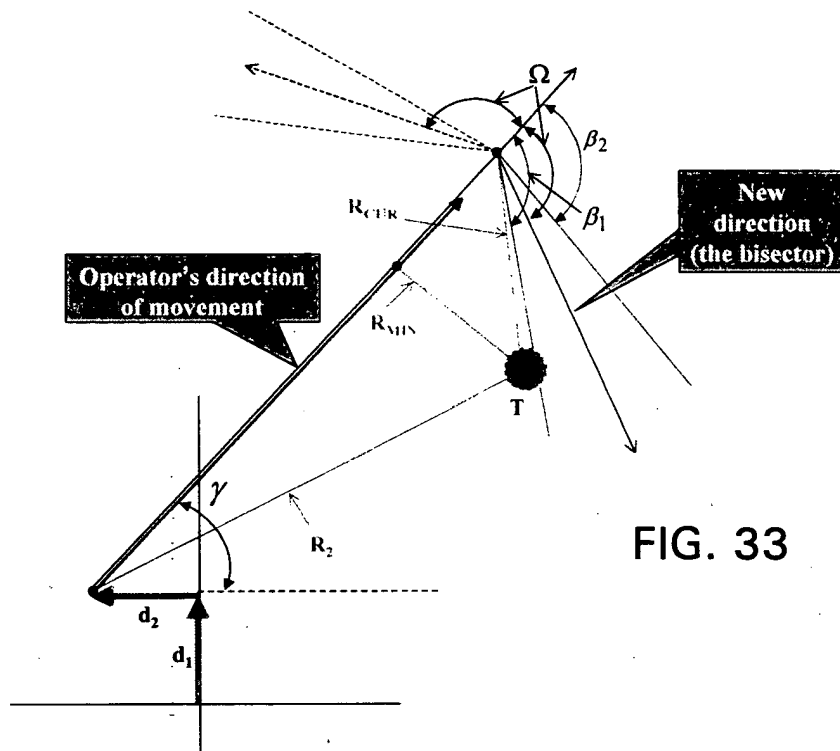


FIG. 33

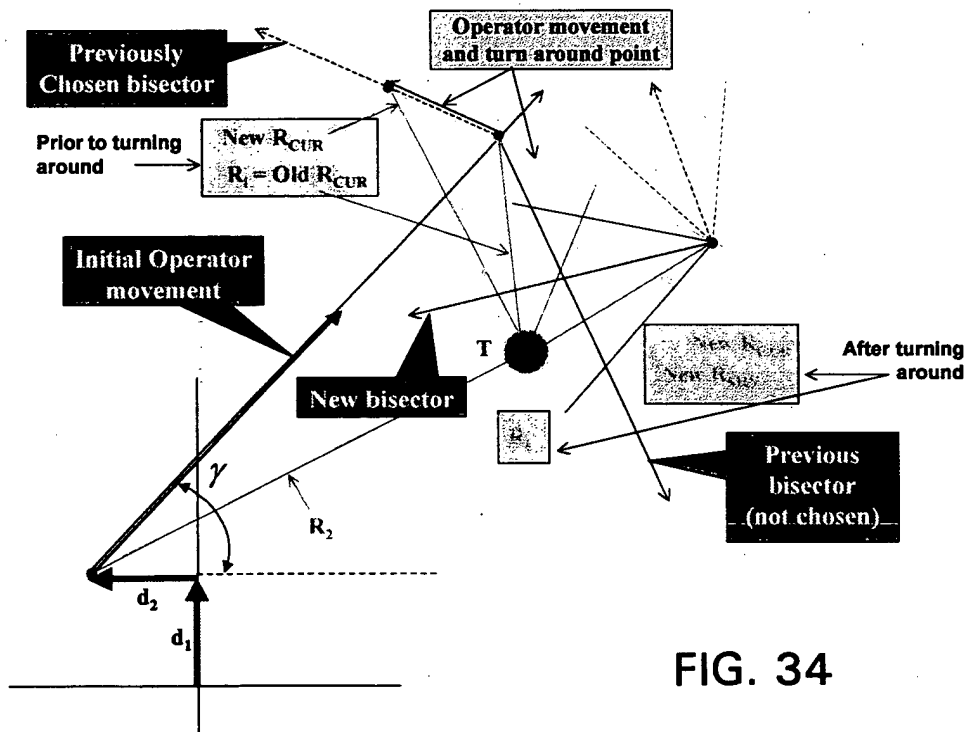


FIG. 34

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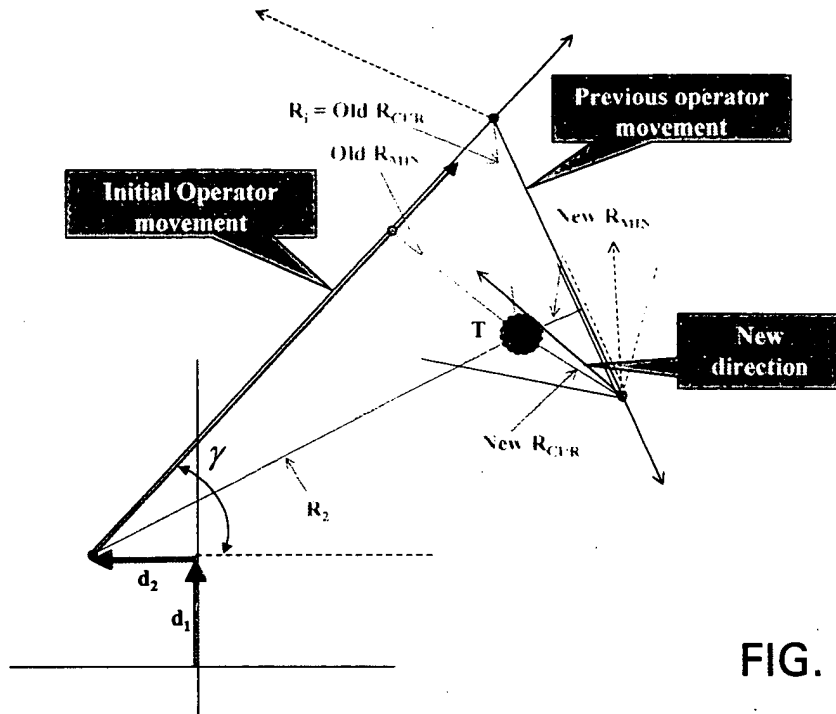


FIG. 35

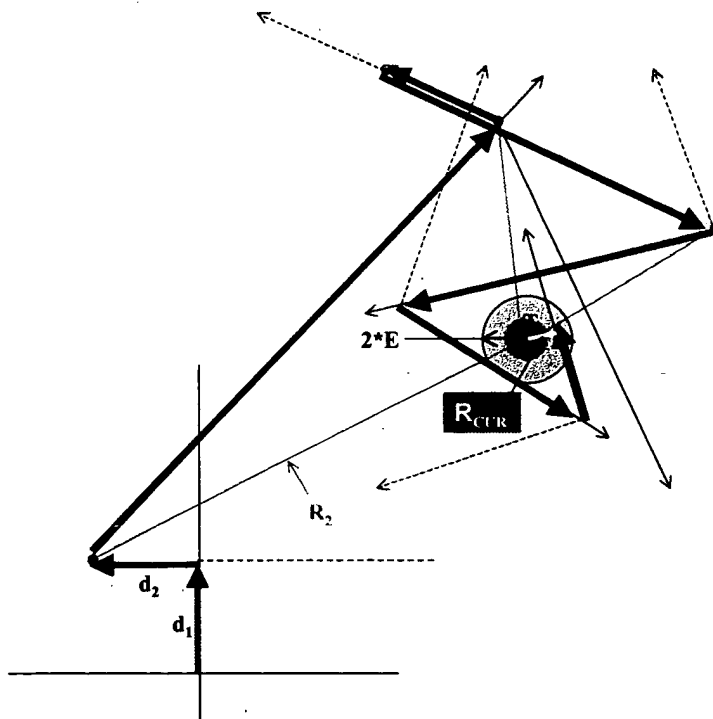
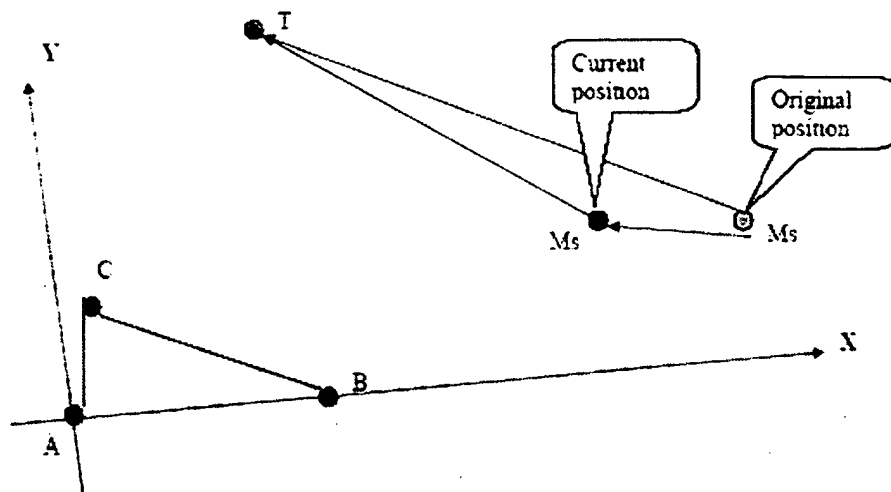
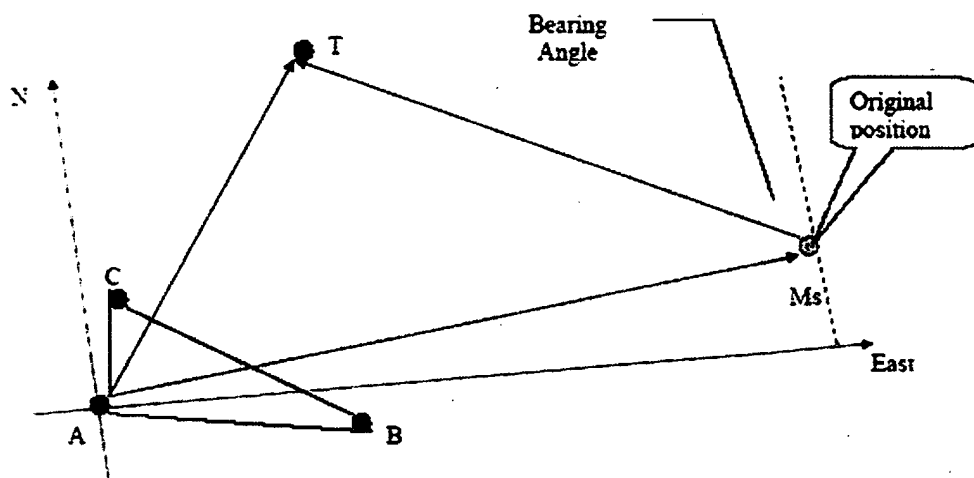


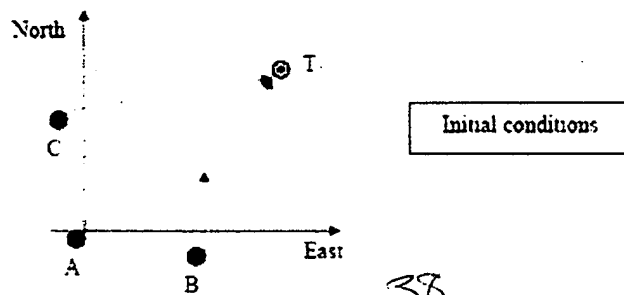
FIG. 36



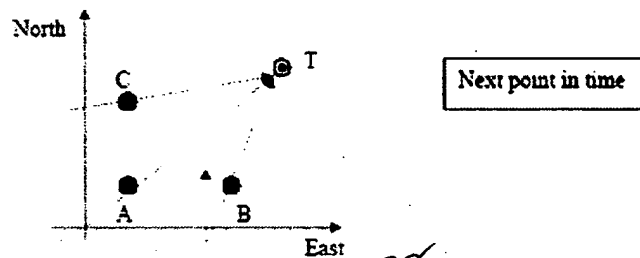
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FIG. 38A



37
FIG. 38B



38
FIG. 38A



38
FIG. 38B

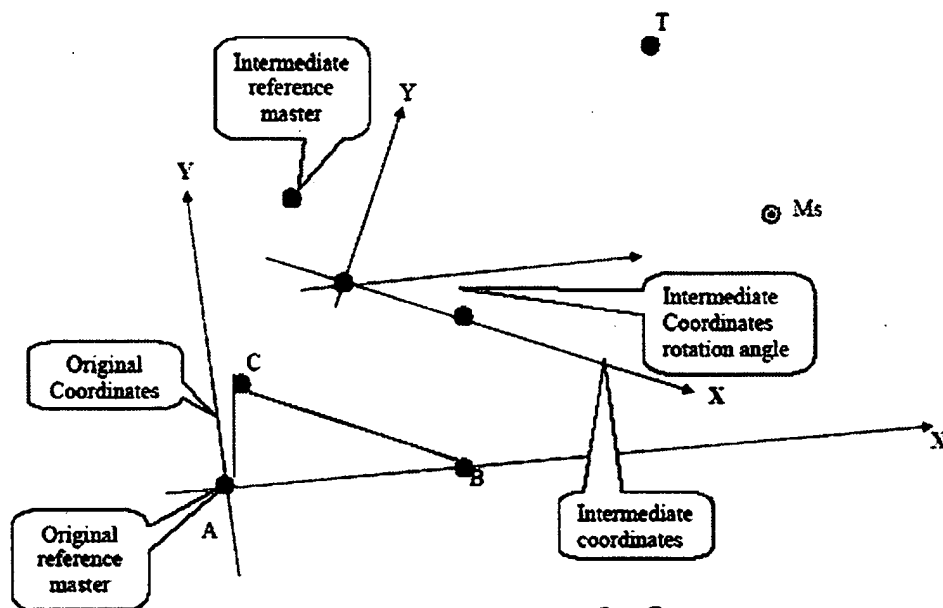


FIG. 40 39